

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (Canceled)
2. (Currently amended) AThe disposable cartridge of claim 1 that operates in conjunction with a point-of-care analytical device, said cartridge comprising:
a network of conduits and reservoirs within said cartridge; and
at least one micro pump fluidly coupled to said network for transporting small volumes of
biological fluid, said pump comprising:
a rotatable portion having a magnetic core and configured to be rotatable by alternating
inductive magnetic fields to urge fluid through said network,
wherein said rotatable portion comprises a microscopic paddle wheel.
3. (Currently amended) AThe disposable cartridge of claim 1 that operates in conjunction with a point-of-care analytical device, said cartridge comprising:
a network of conduits and reservoirs within said cartridge; and
at least one micro pump fluidly coupled to said network for transporting small volumes of
biological fluid, said pump comprising:
a rotatable portion having a magnetic core and configured to be rotatable by alternating
inductive magnetic fields to urge fluid through said network,
wherein said rotatable portion has a hydrophobic surface.

4. (Currently amended) The disposable cartridge of claim 24 wherein said alternating inductive magnetic fields provide a torsion force to the rotatable portion that does not exceed the level that would lyse or puncture blood cells.
5. (Currently amended) The disposable cartridge of claim 24 wherein a plurality of micro pumps are placed within the network of the cartridge.
6. (Canceled)
7. (Currently amended) The point-of-care device of claim 86 wherein the electromagnet is reused with successive disposable cartridges and the rotatable portion is contained in the cartridge and does not contaminate the electromagnet.
8. (Currently amended) A~~The~~ point-of-care analytical device, said device comprising: ~~of claim 6~~
a disposable cartridge;
a network of conduits and reservoirs within said cartridge;
a micro pump fluidly coupled to said network for transporting small volumes of
biological fluid, said pump comprising a rotatable portion configured to be rotatable by
alternating inductive magnetic fields to urge fluid through said network; and
an external electromagnet providing said alternating inductive magnetic fields for causing
the rotatable portion to move to transport small volumes, said electromagnet positioned external
to said disposable cartridge and fluidically isolated from said micro pump;

wherein said rotatable portion comprises a microscopic paddle wheel coupled inductively to said external electromagnet.

9. (Currently amended) The point-of-care of device of claim 86 ~~comprises a system wherein~~
~~an~~~~the~~ actual pumping mechanism of the micro pump is completely isolated from said external electromagnet.

10. (Currently amended) A~~The~~ point-of-care analytical device, said device comprising: a
system

a disposable cartridge;

a network of conduits and reservoirs within said cartridge;

a micro pump fluidly coupled to said network for transporting small volumes of
biological fluid, said pump comprising a rotatable portion configured to be rotatable by
alternating inductive magnetic fields to urge fluid through said network; and
an external electromagnet providing said alternating inductive magnetic fields for causing
the rotatable portion to move to transport small volumes, said electromagnet positioned external
of said disposable cartridge and fluidically isolated from said micro pump;

wherein said rotatable portion comprises a microscopic paddle wheel coupled inductively
to said external electromagnet; and

wherein the paddle wheel to actuate the motion may be separated by either plastic or
silicon and still maintain an inductive coupling with the paddle wheel such that the magnetic
core spins by rotating the magnetic field.

11. (Original) The point-of-care device of claim 8 wherein the electromagnet comprises a micro-coil which causes the paddle wheel to move according to the alternating field in the micro-coil.
12. (Original) The point-of-care of claim 8 wherein the paddle wheel in micro-pump conduits that contain paddle wheel chambers to house the paddle wheels recessed in the conduits to facilitate cartridge assembly.
13. (Original) The point-of-care device of claim 8 where the paddle wheels act as valves in the network to isolate the biological fluid prior and after pumping to control reaction time and isolate analytical reactions.
14. (Currently amended) The point-of-care of device of claim 86 wherein said alternating inductive magnetic fields provide a torsion force to the rotatable portion that does not exceed the level that would lyse or puncture blood cells.